Project Data Sheet

Telescopes in Education

Last updated: 14 February, 2003 Revision: 03

Project Objectives

- Identify a 3D, telepresence software application that allows a student to "travel anywhere" in our known universe and view that location or use it as a viewpoint to the rest of the universe.
- Enhance the application with new NASA planetary, comet and asteroid data.
- Develop comprehensive, high quality lesson plans addressing the data-enhanced application.
- Establish an internet forum for students and educators to share experiences and lessons.
- Establish a training and dissemination program among educators.

Sample Use Cases

- Student locates and visits a series of recently surveyed astronomical objects to gather data for a study worksheet that requests landscape, size, feature descriptions and comments.
- Museum visitors "hop on" a planet and accelerate time to explore the changing views over the course of the planet's year.
- Students follow a lesson plan carefully crafted to provide an appreciation of the extraordinary scale and distances of the universe, and the age of the light that can be seen.

Customers

- Students and teachers in grades 5-14
- Museum and planetaria visitors and curators

Deliverables for Phase 1

- 3D telepresence application for independently exploring the universe
- Identification and procurement of new planetary, comet and asteroid data
- Application modifications to add the new data.
- Five comprehensive activities based on the data enhancements
- Identification or establishment of internet forum for sharing experiences and lessons among students and teachers
- Training and dissemination materials. Dissemination presentations
- Educator training in classroom activities and lesson plans

Milestones for Phase 1

	When	*What*	*Confidence*
ET.2-L.2-TIE.1	1 Dec '02	Final determination that Celestia will suffice.	Green
ET.2-L.2-TIE.2	1 Feb '03	Identification and acquisition of new planetary, comet, and asteroid data.	Green
ET.2-L.2-TIE.3	1 Jun '03	Incorporation of new data into Celestia.	Green
ET.2-L.2-TIE.4	1 Aug '03	Final activities.	Green
ET.2-L.2-TIE.5	1 Sep '03	Final training and dissemination materials.	Green
ET.2-L.2-TIE.6	1 Sep '03	Training schedule.	Green

People

- Project Manager: Gilbert Clark,
  NASA Jet Propulsion Laboratory
  626.794.1360, Gilbert.A.Clark@jpl.nasa.gov
- Endorsee: Mark Leon
- Alternate contact: Mary Cragg
  626.794.1360, mcragg@earthlink.net

Partnerships

- Virtual TIE project (NSF funded)
- California State University, Los Angeles
- New Roads School (Santa Monica, CA)
- Thomas Jefferson School (Alexandria, VA)

Technologies

- TIE (Telescopes in Education) Program
- Celestia space simulation software

Quality Assurance

- Basic testing of application in local lab
- Beta testing by education partners

Dependencies

- Celestia space simulation software
- Availability of NASA data

Assumptions

- Celestia space simulation software is open-source and freely distributable.
- Data enhancements can be easily incorporated as "add-ons" to Celestia.